

CPC464
CPC6128
GT65
GT65
CTM644
MP3
CT1
AMENDMENT
SERVICE MANUAL

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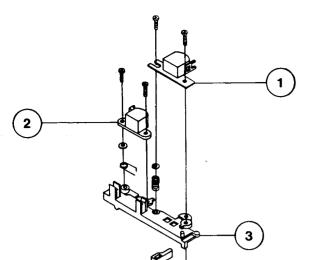
CPC464 SECTION

CPC464 ELECTRICAL PARTS LIST

Ref. No.	Description	Part No.
IC's		
IC101 IC102 IC103	IC DN74LS145 IC AY-3-8912 IC Amstrad 40009	170101 40001 170102
IC104, 105, 109 113	9, IC DN74LS153	170103
IC106 IC107	IC DN74LS273 IC TMP-8255AP	170104 170105
IC108	IC HD6845SP	170103
IC110 IC111	IC DN74LS132	170107
IC111	IC Z8400APS IC DN74LS32	40080 40013
IC114	IC DN74LS373	170108
IC115 IC116	IC DN74LS244 IC AMS40010	170109
IC117-124	IC KM4164B-15	40010 170110
IC125	IC TC74HCU04AP	40008/A
IC301 IC302	IC LA4140 IC LA6324	170111 170112
Transistors		1,70112
Q101 Q102, 301	TR KTC2120Y TR KTC1815-T	170113 170447
Diodes		
D101	D 1S2472T-77	170115
D301 D302	D 1N4002 LED	400111
Ref. No.	Description	170116 Part No.
Coils		
L301	Coil 82μH	170117
Crystals		
X101	Crystal HC-49/U	170125
Switches		
SW301 SW302	Switch, Slide	170122-A
SW302 SW303	Switch, Slide Switch, Key Board	170002 170007-C
Variable Resist		
VR301	VR Rotary 20kΩ	170003
Miscellaneous		
R326	Resistor Fuse 4.7Ω/¼W	170130
NR101	Resistor Network 2.2kΩ x 6	170131
SP301 RY301	Speaker Relay	170124 170123
Sockets		
J101	Jack DIN	170025
J102 J103	Socket, D Sub 9 Pin Jack 3.5	170023-2 170022
J104	Jack 5.5 Jack DC	170022

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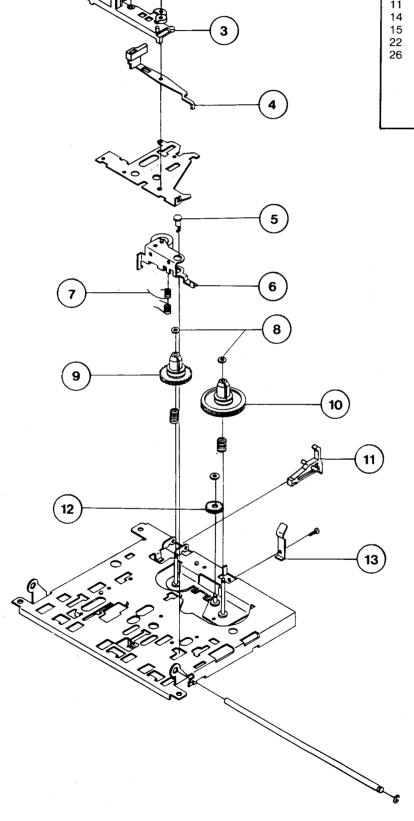
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PCB303	
	(3)
	CPC464 CABINET PARTS LIST
PCB302	Ref. Description Part No.
	1 Lid, Cassette Assembly 170006
	2 Cabinet, Top Assembly 170031/A 170004 170004
	6 Cabinet, Bottom 170030/A 7 Button, Record 170015
	8 Button, Play 170016
	9 Button, Rewind 170017 10 Button, Forward 170018
	11 Button, Stop/Eject 170019 12 Button, Pause 170020
	Counter Belt 170014
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Counter 170013
	*For parts not listed in this
8 8 8 8 8	please refer to original manual.
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	A O
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PCBIOi	
A M I M	-
	PCB301
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8	
A	
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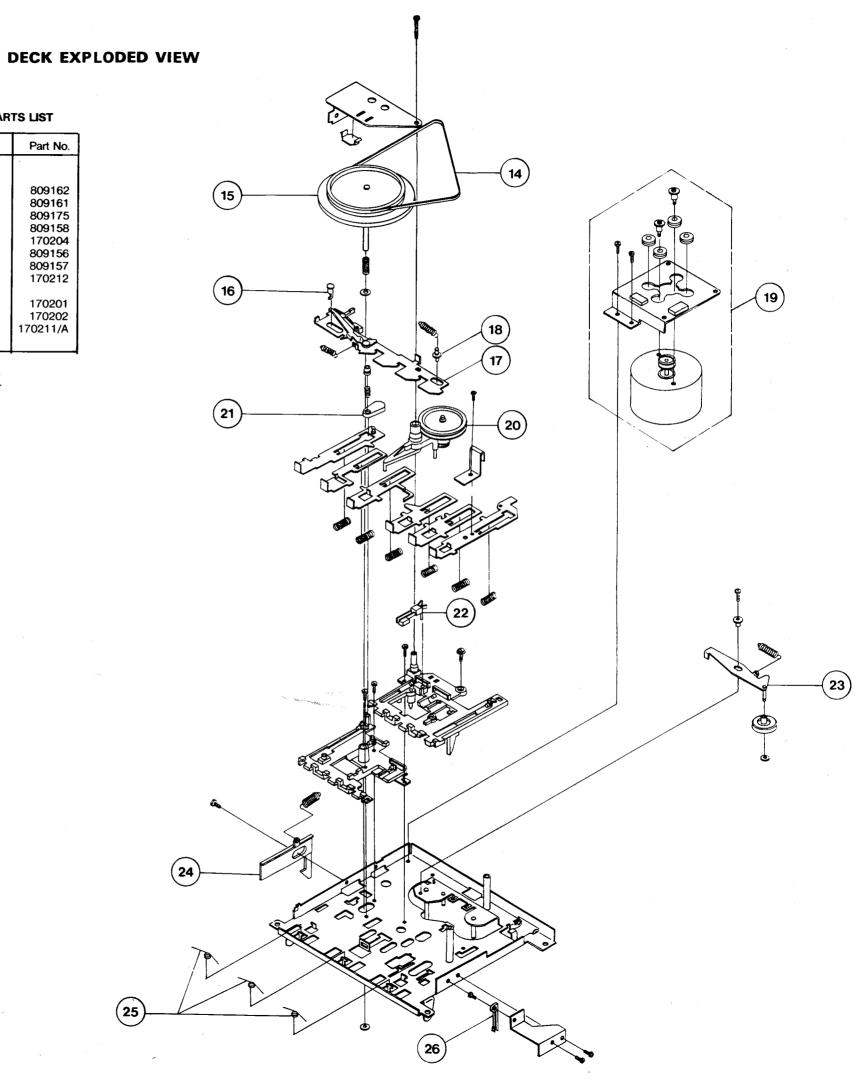


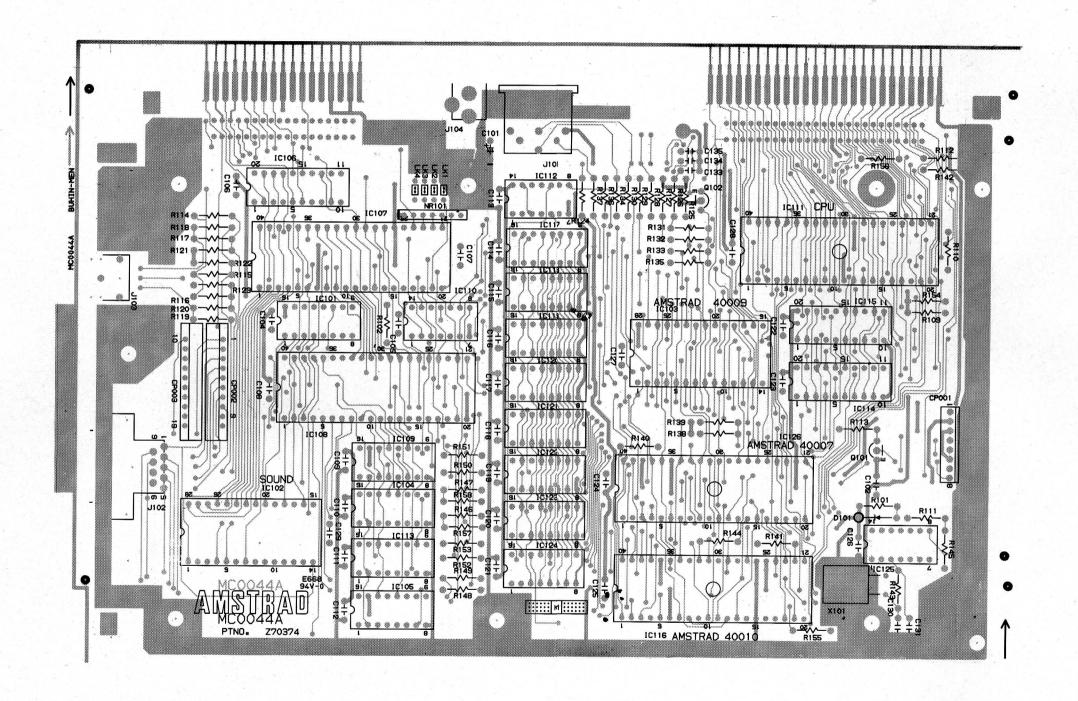
CPC464 CASSETTE MECHANISM PARTS LIST

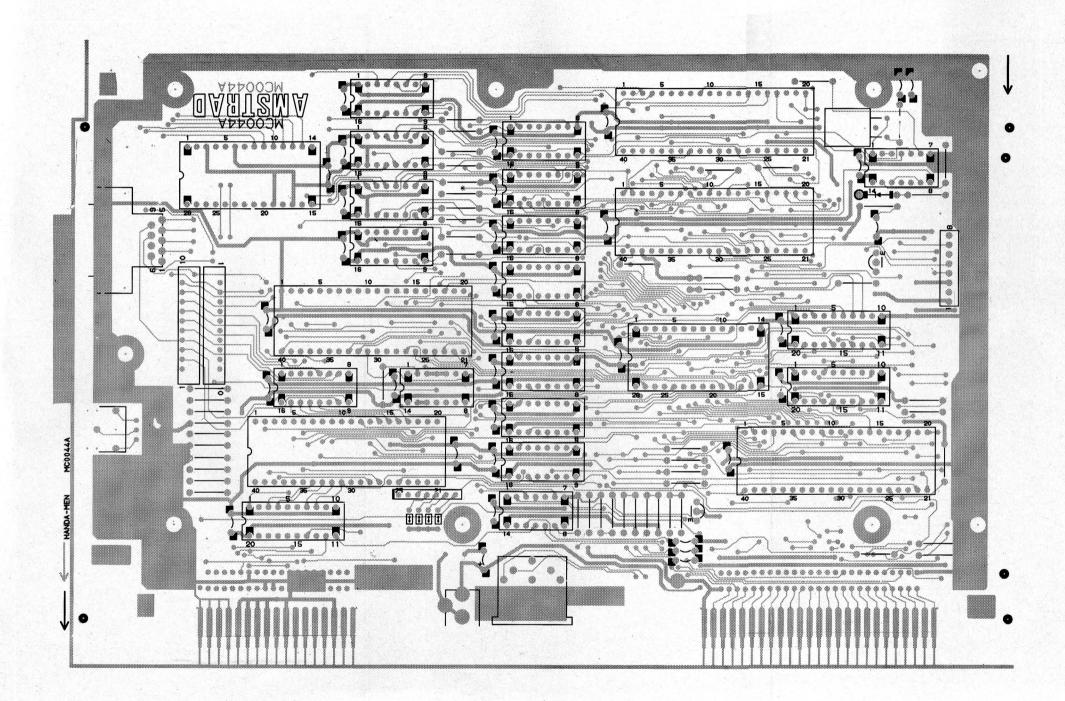
Ref.	Description	Part No.
4	Sensing Plate	
5	Pinch Roller Arm Stopper	
6	Pinch Roller	809162
7	Pinch Roller Spring	809161
8	Polyslider Washer	809175
11	Record Safety Lever	809158
14	Main Belt	170204
15	Flywheel	809156
22	Switch, Leaf LSA-1120RC	809157
26	Switch, Leaf LSA-115D	170212
1	Actuator Spring	
	Head Record Play-Back	170201
	Head, Erase	170202
	Motor Assembly	170211/A
	Cassette Mechanism Complete	

^{*} For parts not listed in this please refer to original manual.

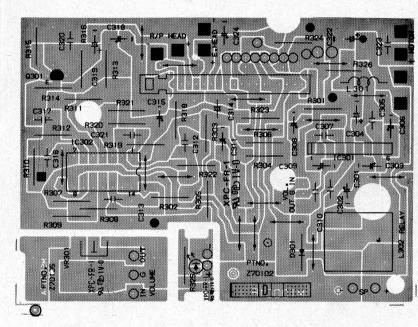




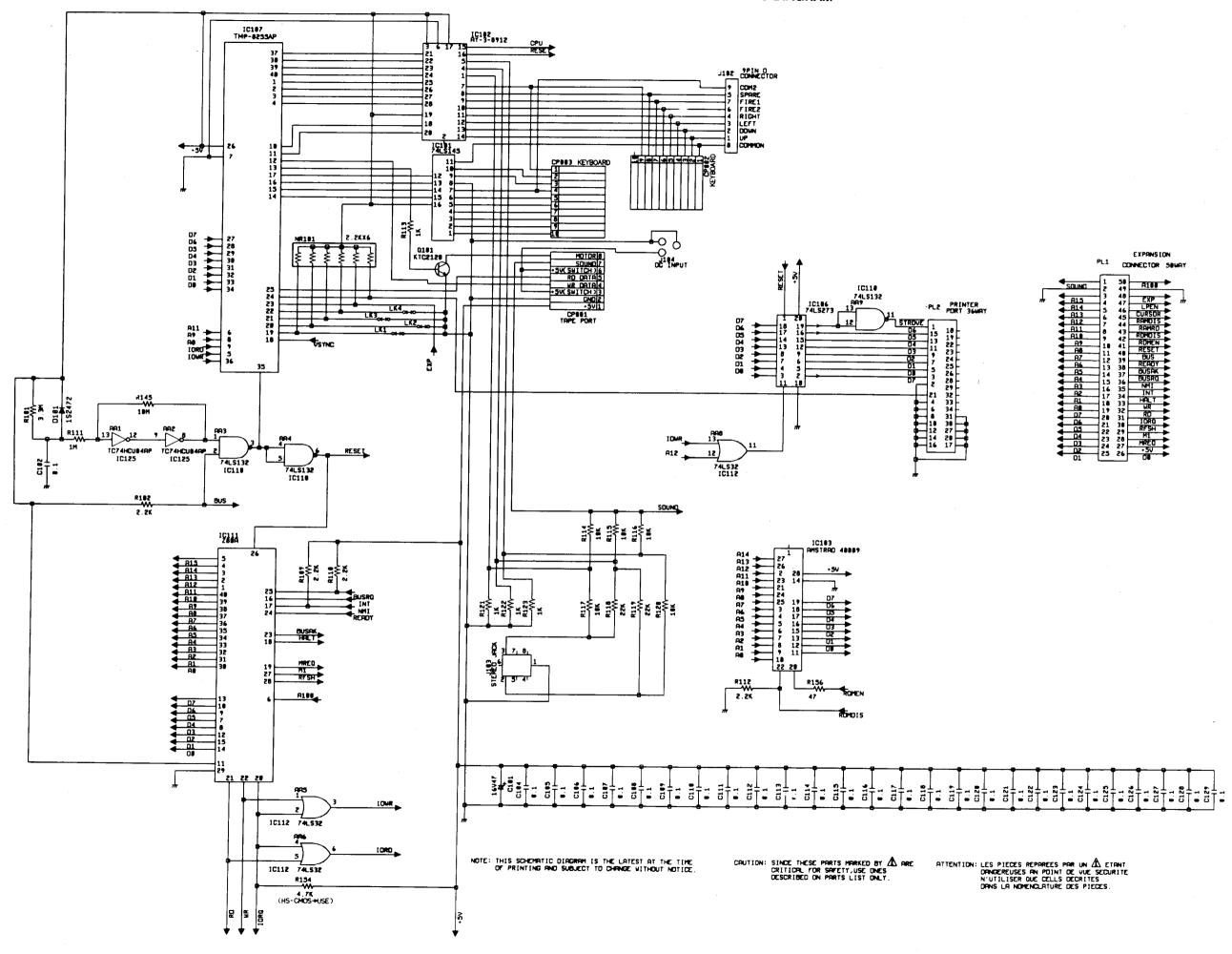




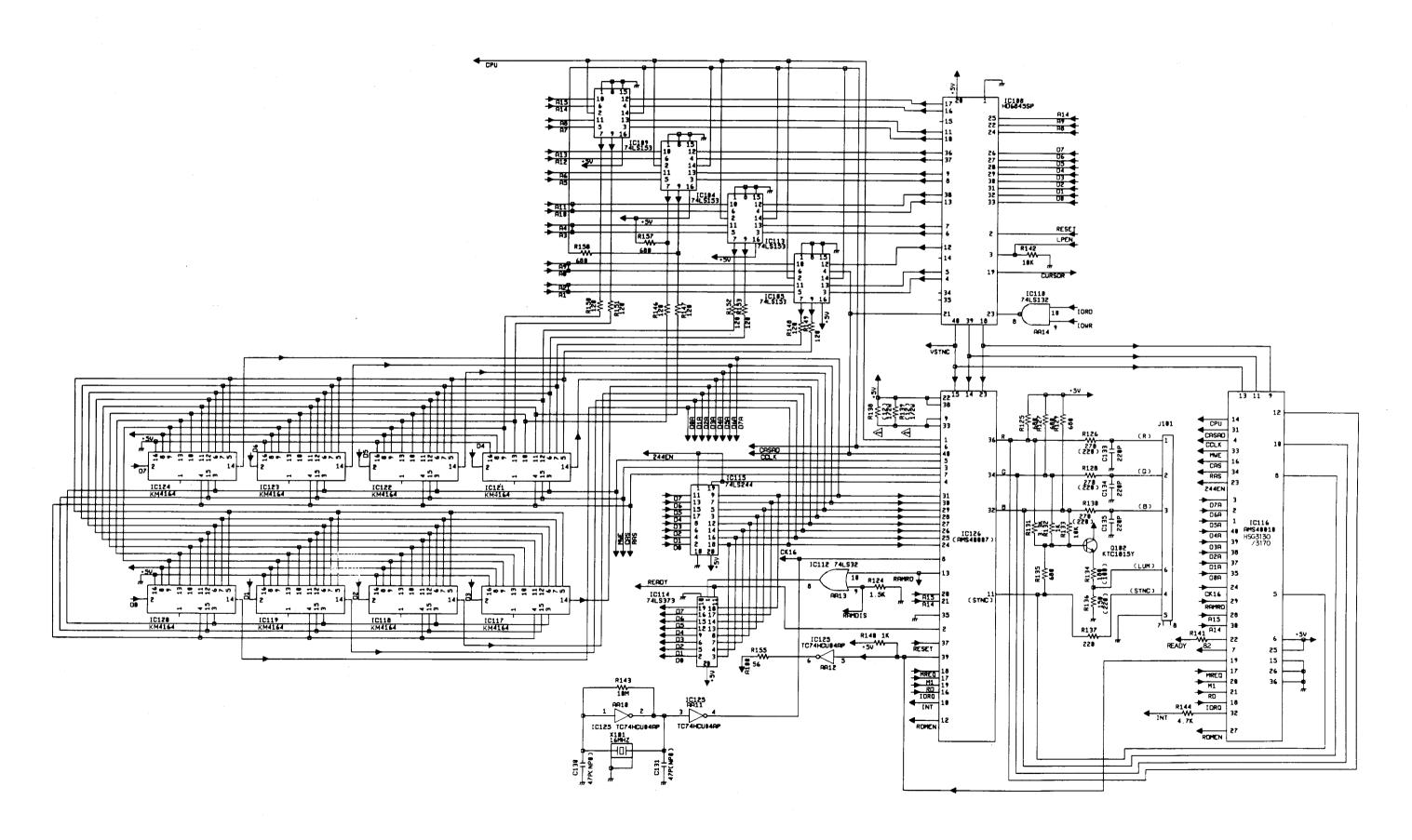
CPC464 TAPE P.C.B.



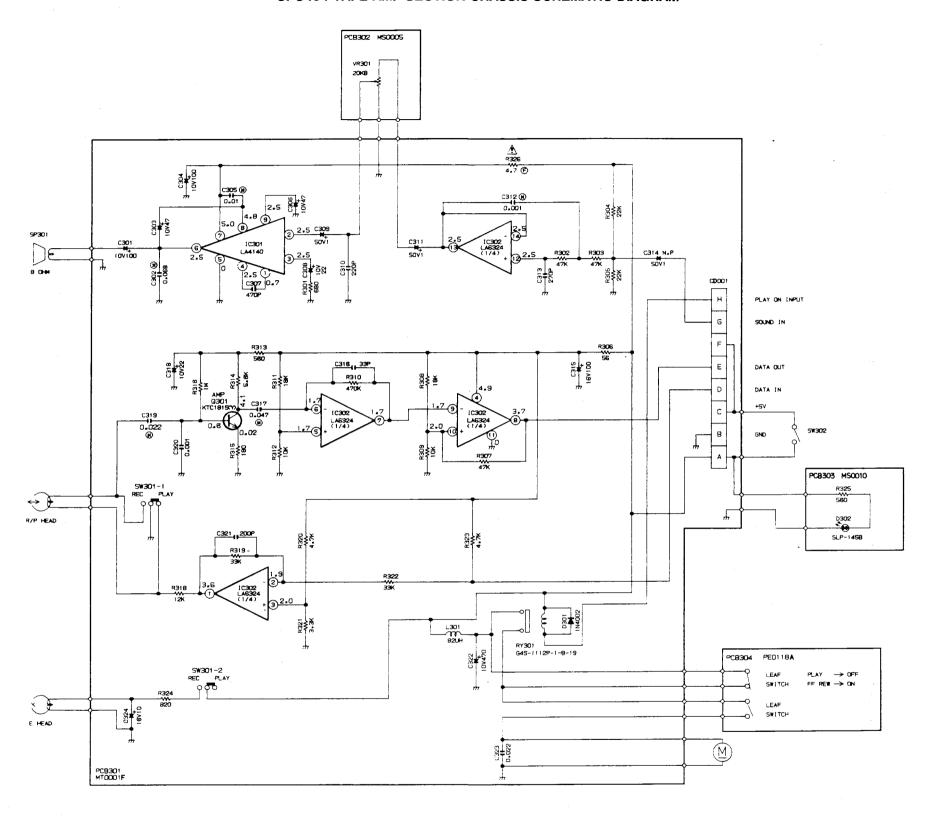
CPC464 CPU/PIO SECTION CHASSIS SCHEMATIC DIAGRAM



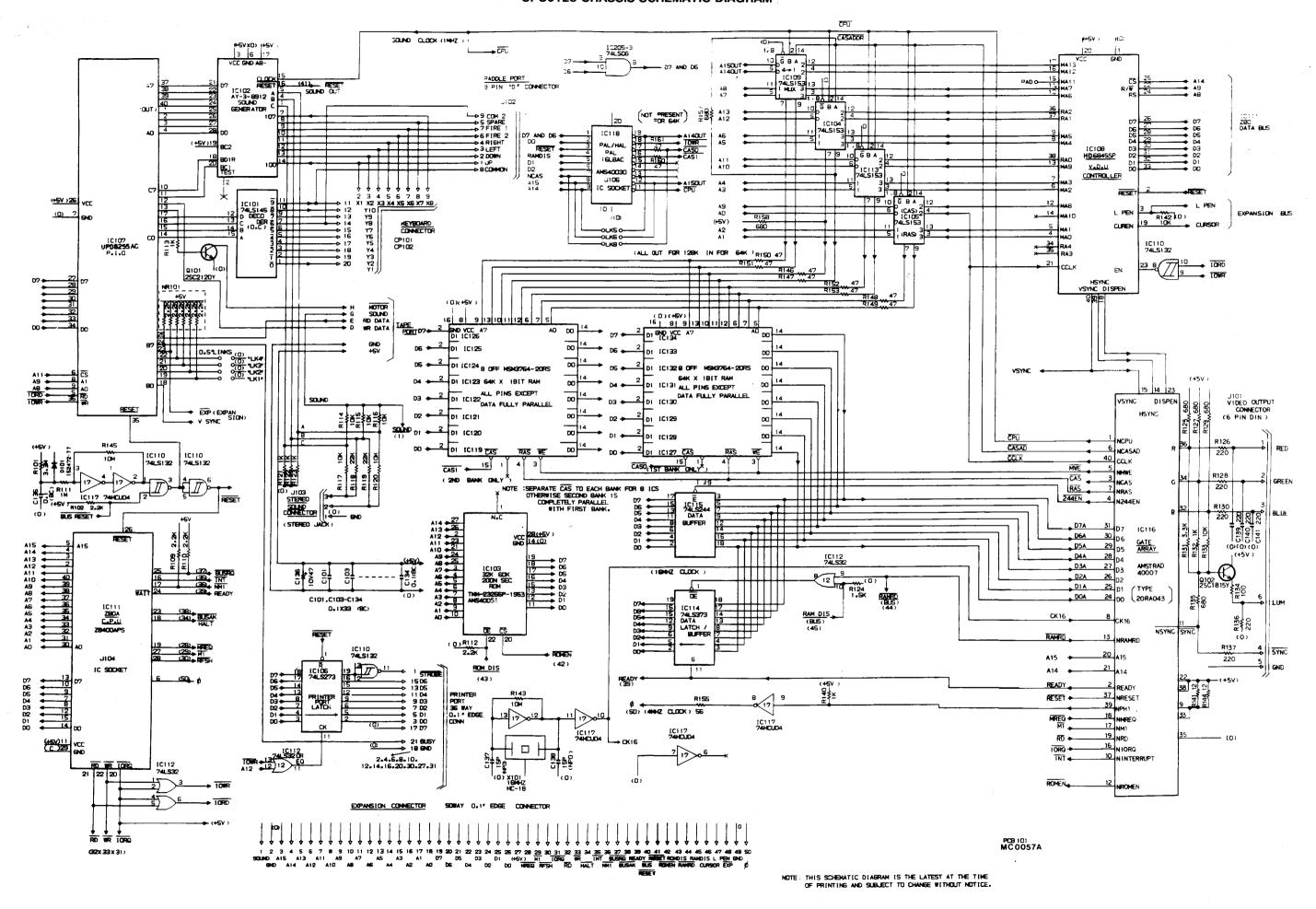
CPC464 RAM/CRTC/ULA SECTION CHASSIS SCHEMATIC DIAGRAM

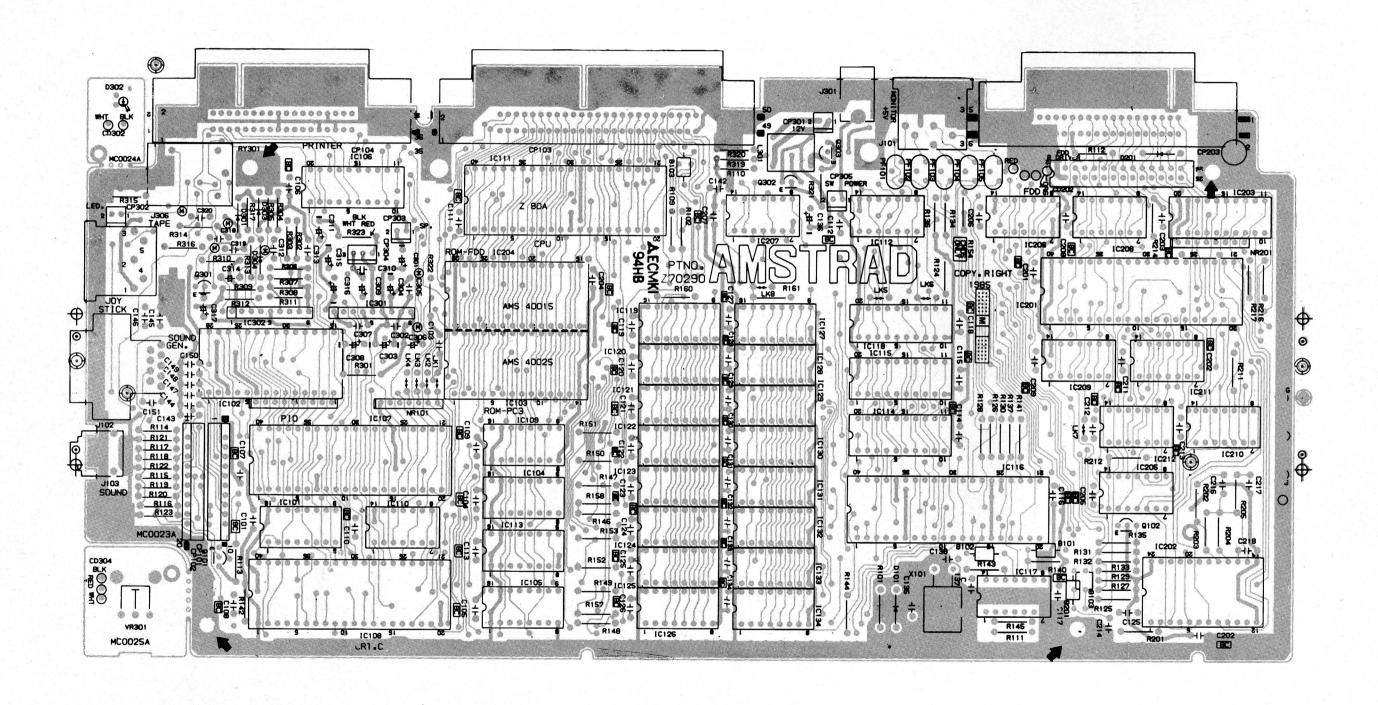


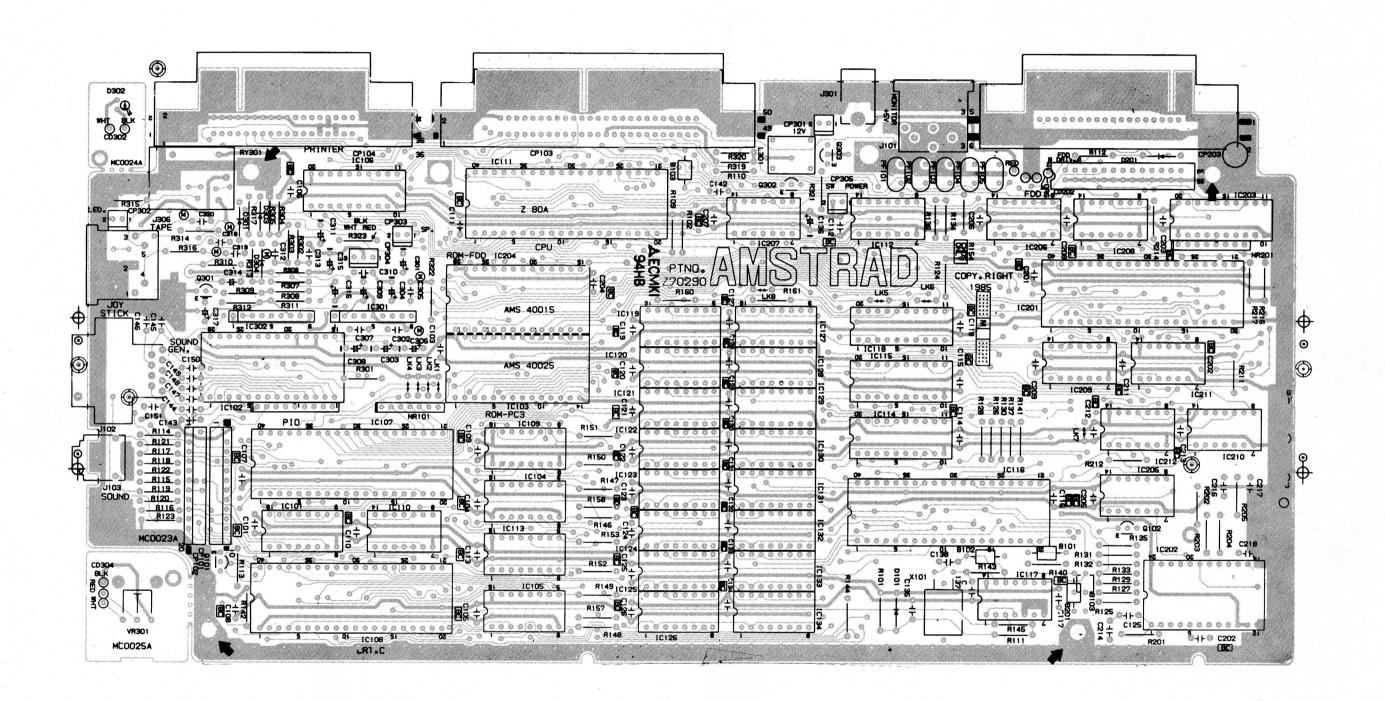
CPC464 TAPE AMP SECTION CHASSIS SCHEMATIC DIAGRAM



CPC6128 CHASSIS SCHEMATIC DIAGRAM







SYMBLE LIST

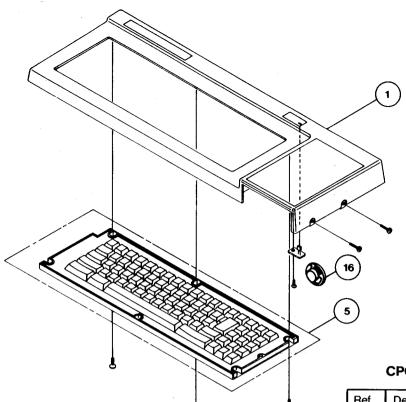
RESISTOR		
SEMI-FIXED RESISTOR	I	
CAPACITOR		##
JUMPER	← →	

CPC6128 SECTION

CPC6128/III ELECTRICAL PARTS LIST

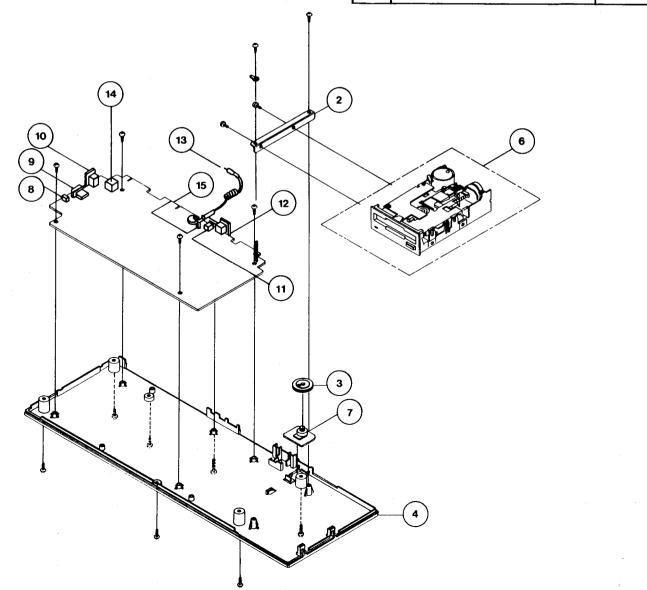
Ref. No.	Description	Part No
IC's		
IC101	IC Amstrad 40226	40220
IC102	IC TMP-8255AP	17010
IC103	IC AY-3-8912	4000
IC104	IC DN74LS145	17010
IC105	IC Z8400APS	40080
IC106	IC DN74LS174	171387
IC107	IC DN74LS175	17608
IC108	IC Amstrad 40025	40025
IC109-124	IC KM4164B	170110
IC201	IC Z765APS	40018
IC202, 203	IC DN74LS38	40019
IC204	IC TC74HC14AP	171030
IC205	IC Amstrad 40015	40015
IC206	IC SED9420CAC	171034
IC301	IC LA6358S	170814
IC302	IC LA4140	170111
Transistors		
Q101, 102, 104,	TR KTC1815	170447
201		1
Q103	TR KTA950Y	170448
Diodes		
D101, 301, 302	D 1S2472T	170115
D303	D 10E1 FA8	170865
D304	LED SLP-155B	170866
Crystals		
X101	Crystal HC-49/U 16.00MHz	170908

Ref No.	Description	Part No.
Sockets		
J101 J102 J103 J301 J306	Jack DIN Socket D Sub 9 Jack, RCA 3.5 Jack, DC Jack, DIN	170025 170023 170022 170024 170850
Variable Resiste	ors	
VR301	VR, Rotary 20k Ω	170807
Switches		
SW101 SW301	Switch, Keyboard Switch, Slide	170858 170906
Fuses		
R301	Fuse 4.7Ω	170866
Miscellaneous		
FDD201 RY301 SP301 NR101 NR102 NR201	Floppy Disc Drive EME-156V Relay Speaker Resistor Network $2.2k\Omega \times 6$ Resistor Network $2.2k\Omega \times 8$ Resistor Network $680\Omega \times 6$	190005 170123 170124 170131 170132 170133

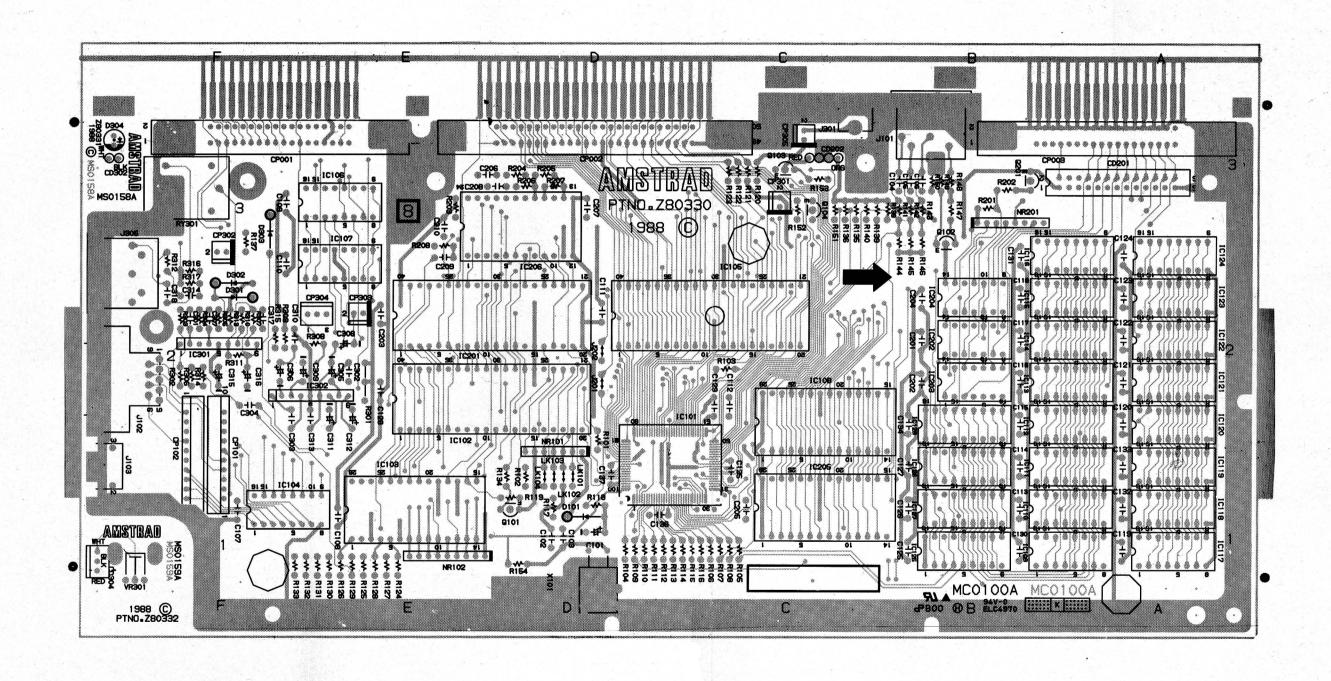


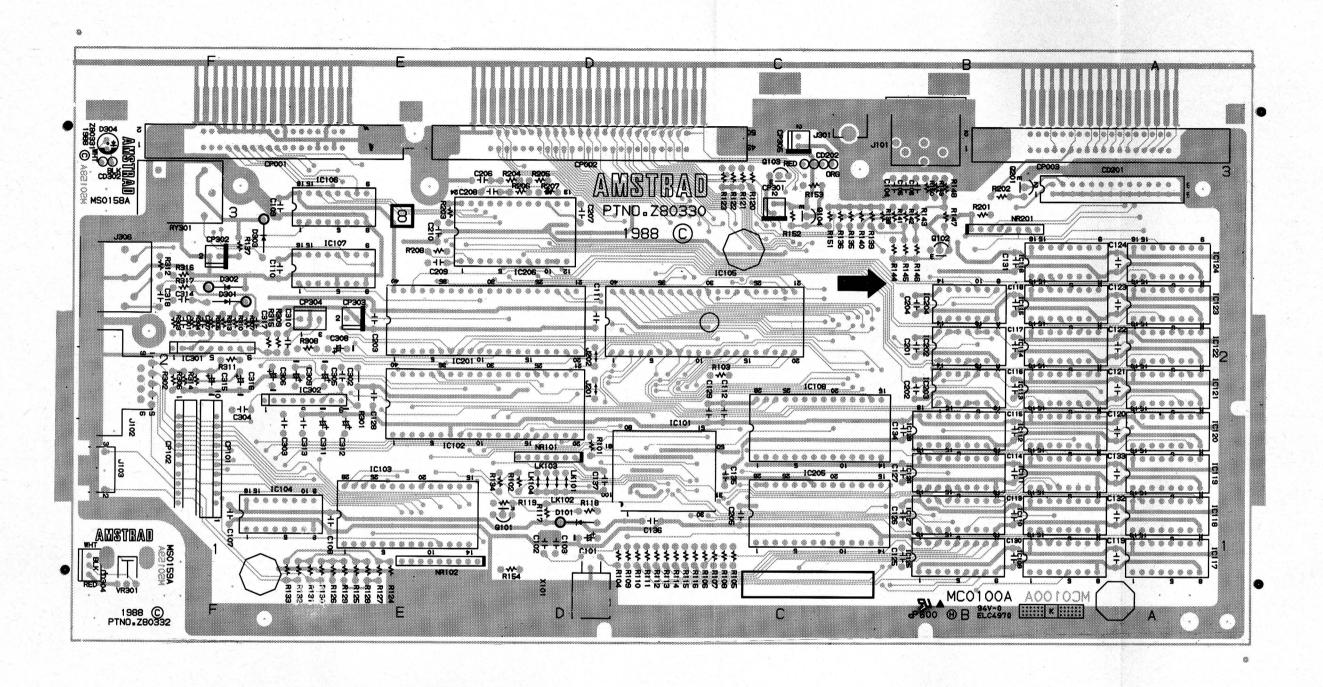
CPC6128/III CABINET PARTS LIST

Description	Part No.
Cabinet, Top Assembly	170901
Frame, FDD	171007
Knob, Volume	170902
Cabinet, Bottom Assembly	170903
	Cabinet, Top Assembly Frame, FDD Knob, Volume

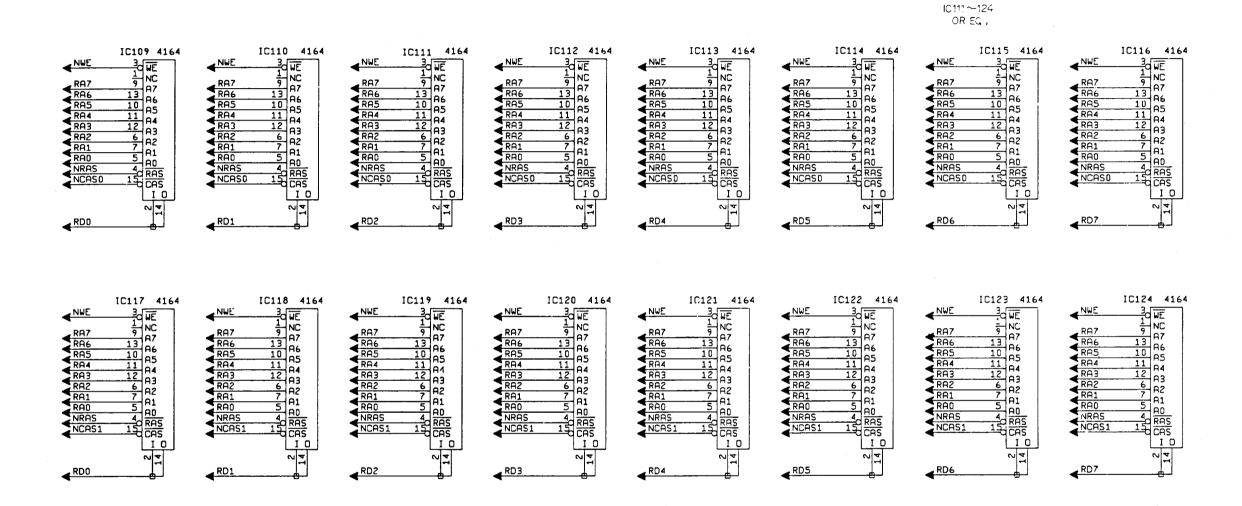


CPC6128 MAIN/LED/VOLUME P.C.B. (Top View)

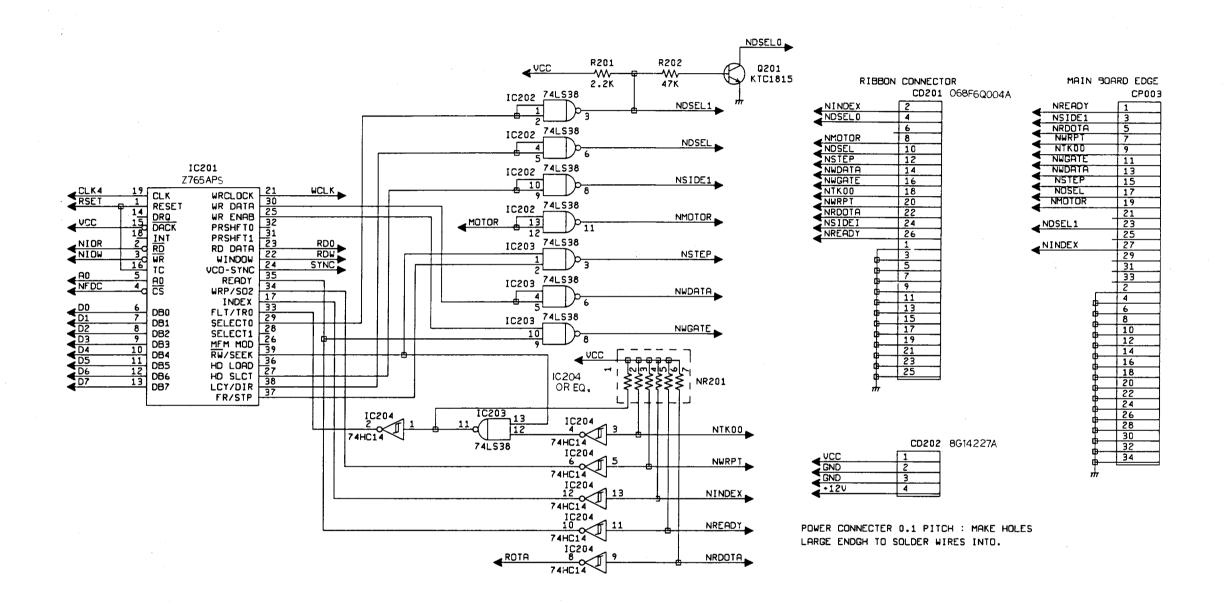




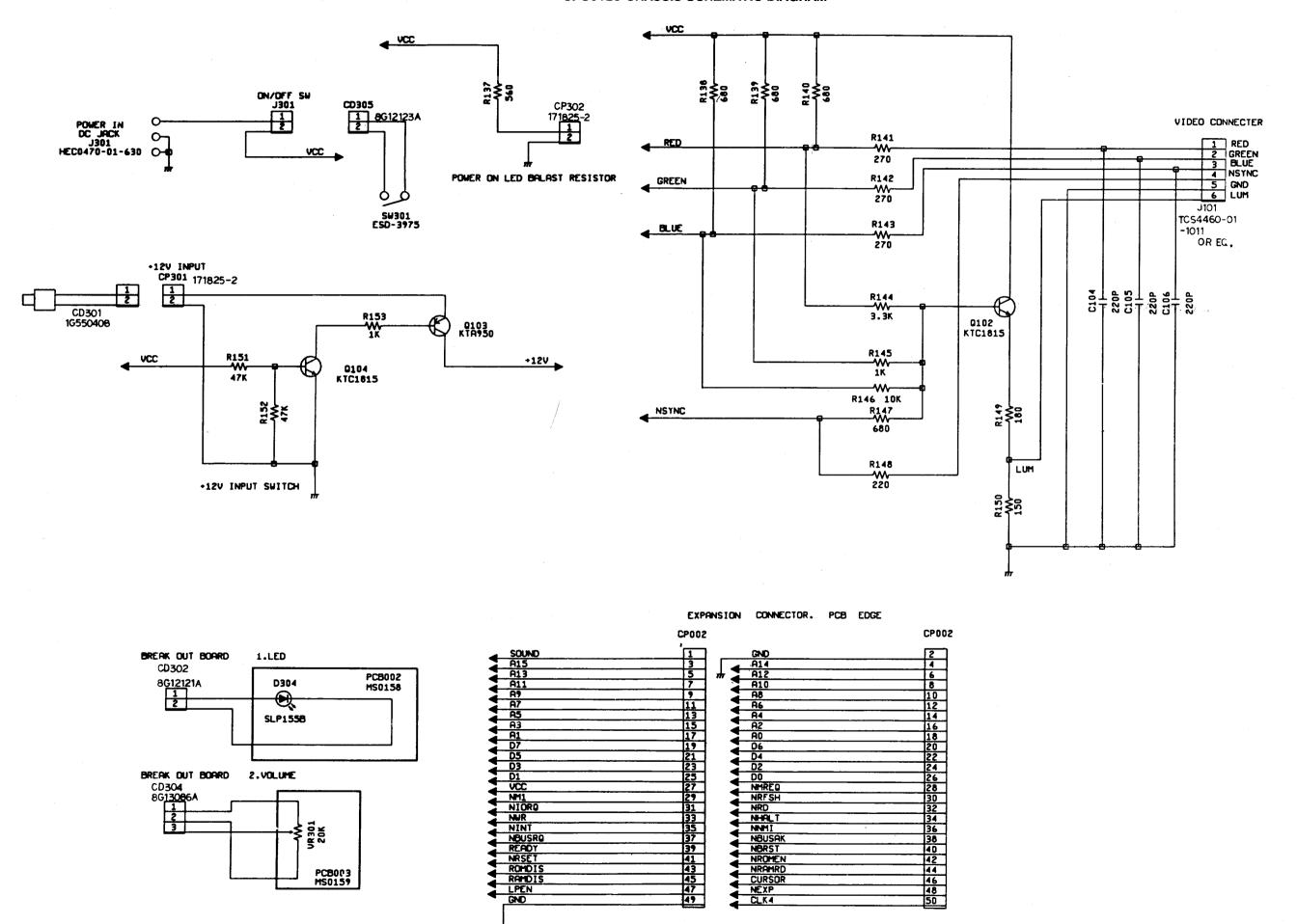
CPC6128 RAM SECTION CHASSIS SCHEMATIC DIAGRAM



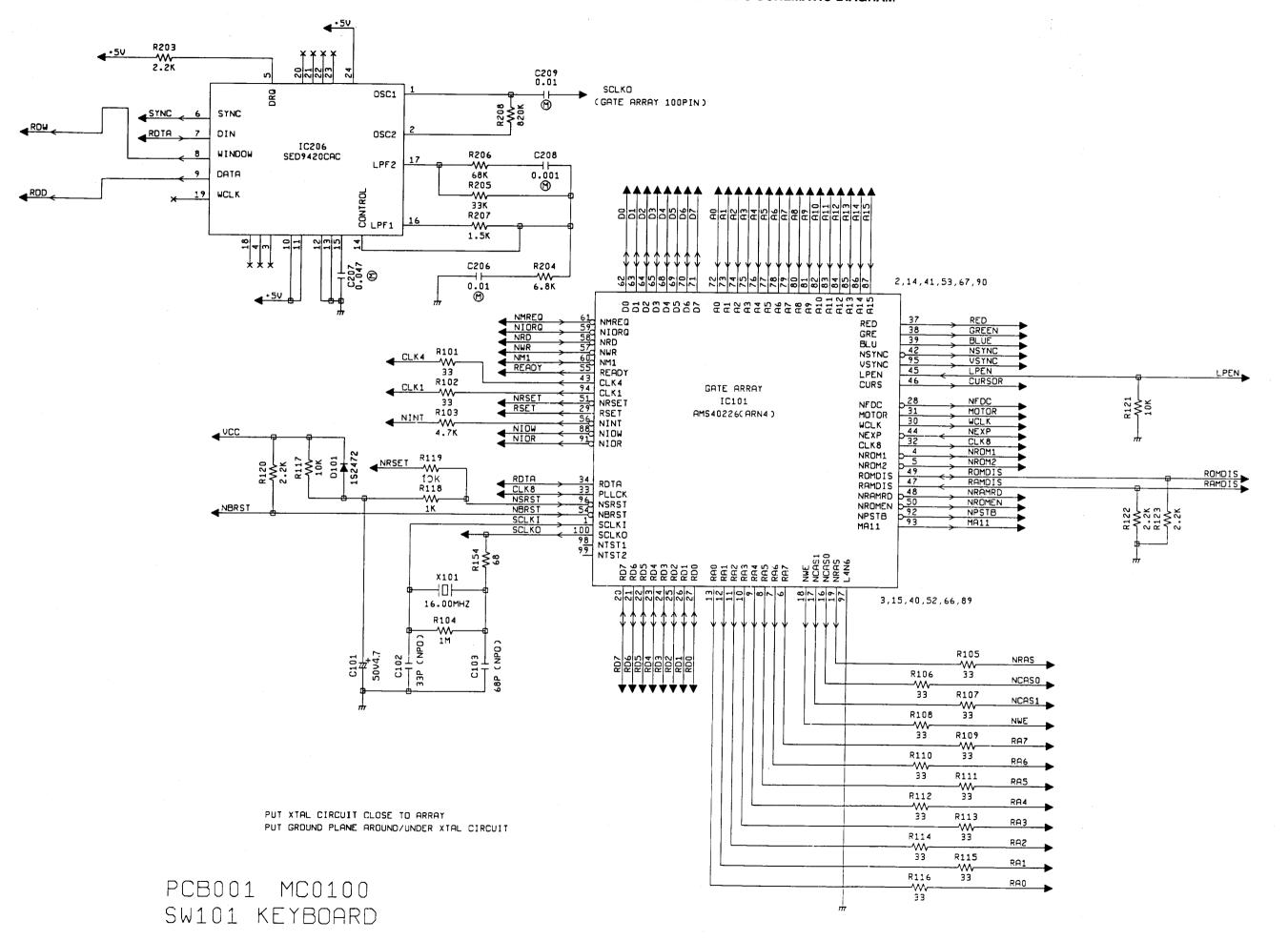
CPC6128 CPU SECTION CHASSIS SCHEMATIC DIAGRAM

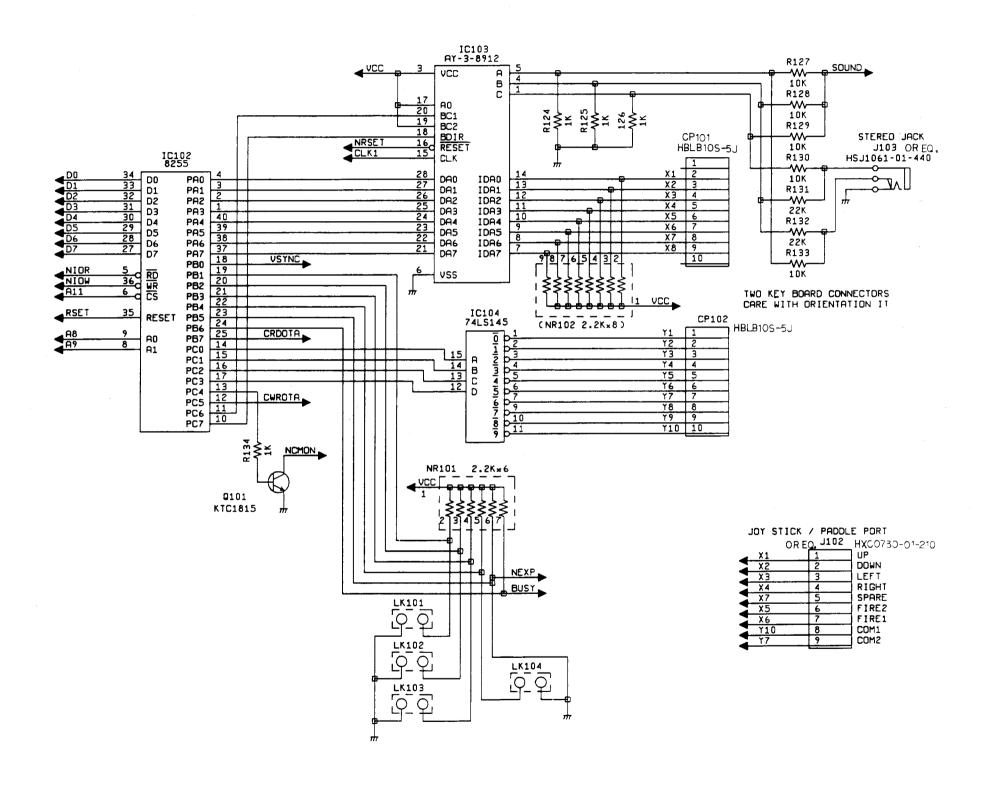


CPC6128 CHASSIS SCHEMATIC DIAGRAM

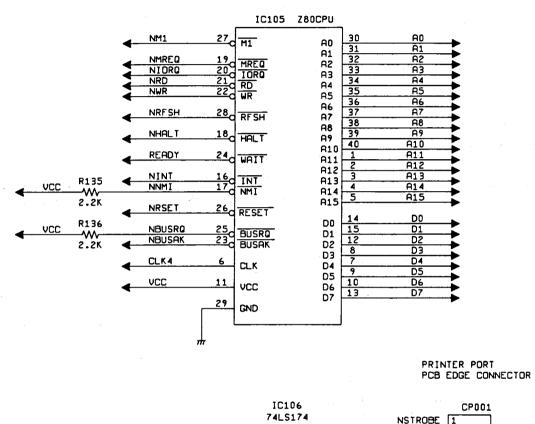


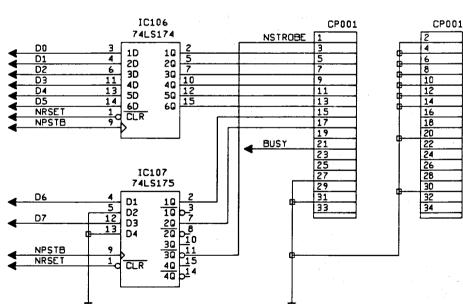
CPC6128 ULA/DS SECTION CHASSIS SCHEMATIC DIAGRAM



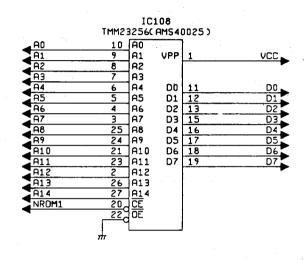


CPC6128 CPU/ROM SECTION CHASSIS SCHEMATIC DIAGRAM

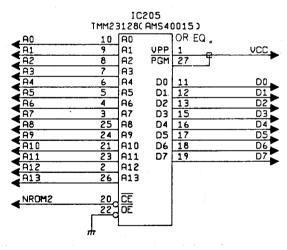


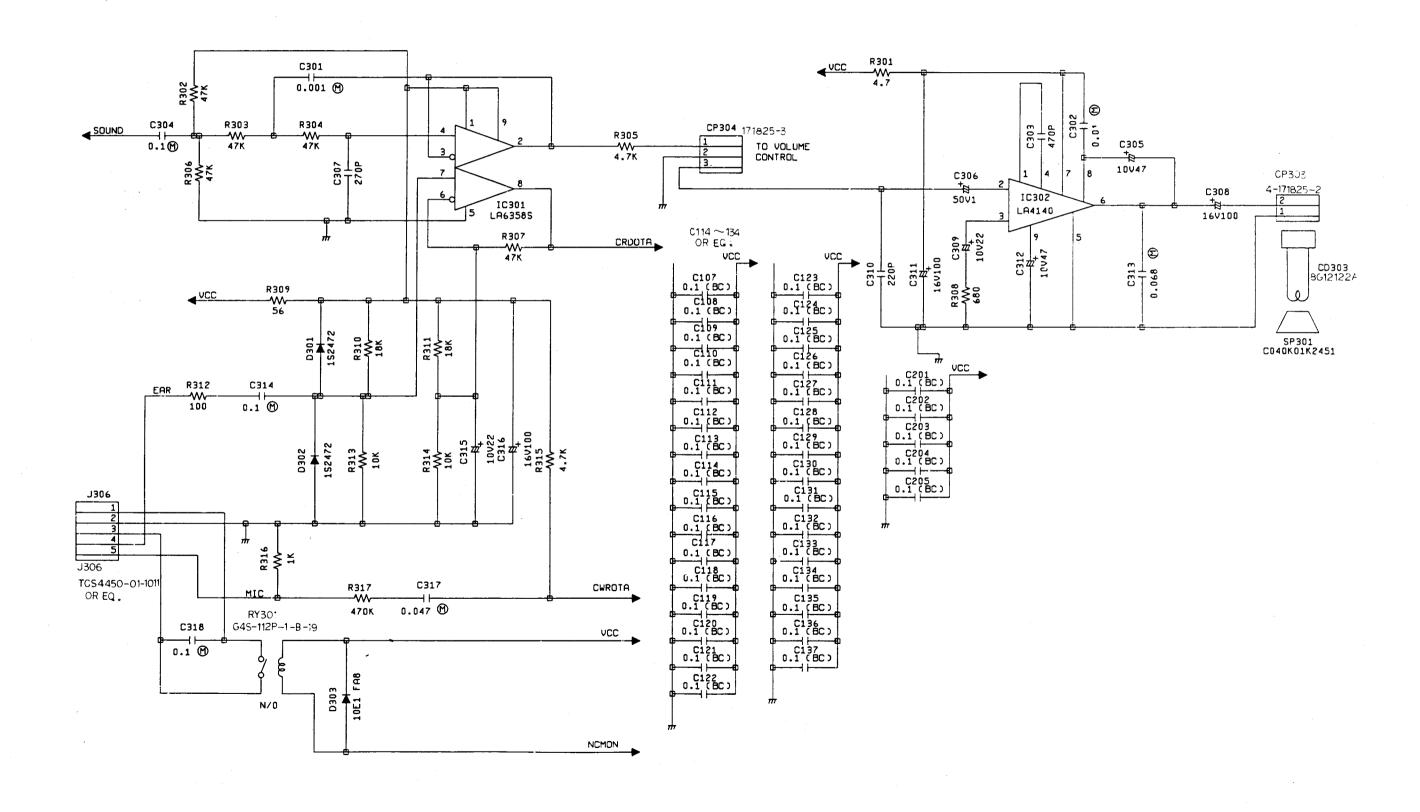


SYSTEM ROM.APPEARS AT TWO ADDRESSES 0000-3FFF AND D000-FFFF

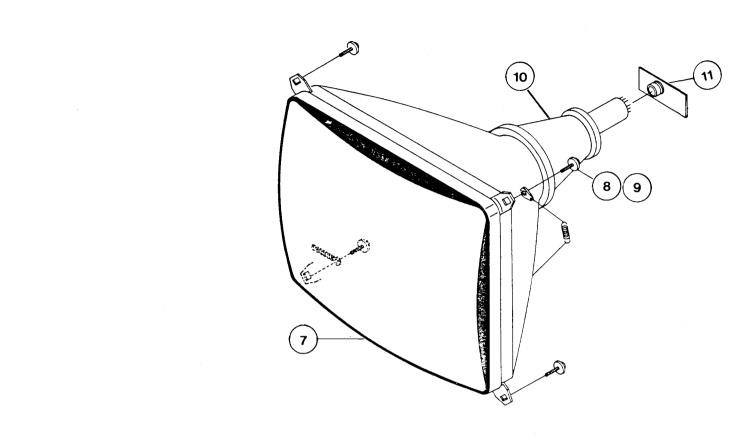


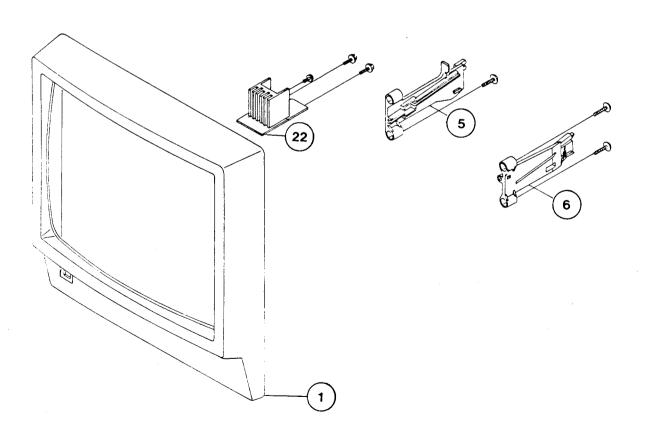
FLOPY DISC CONTROLER ROM

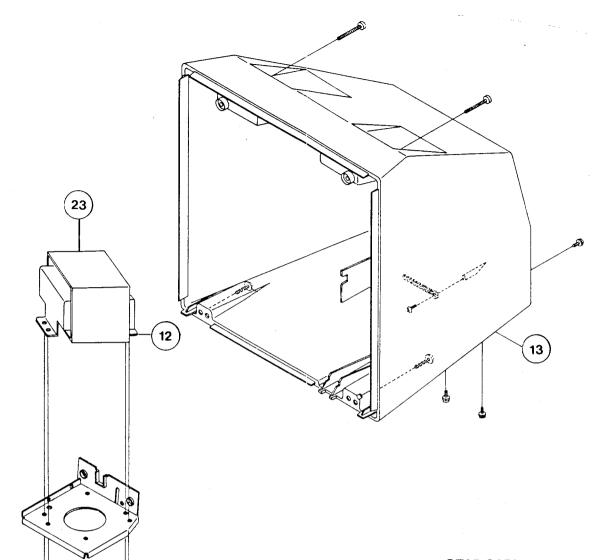


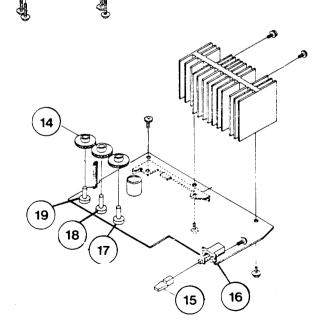


GT65 SECTION









GT65 CABINET PARTS LIST

Ref.	Description	Part No.
1	Front Cabinet	170150
2	Cable Clamp	170502
5	Bracket PCB (L)	170153
6	Bracket PCB (R)	170154
7	CRT Green	170507
8	Metal Washer CRT	170508
9	Fixing Screw CRT	170509
10	Deflection Yoke	170510
11	CRT Socket	170511
12	Power Transformer	S/170832
13	Rear Cabinet	170155
14	Control Knob	170514
15	Button Power	170515
16	On/Off Switch	170516
17	V. Hold Pot.	170833
18	Contrast Pot.	170518
19	Brightness Pot.	170519
20	D.C. Cord	170516
21	DIN Cord	170157
22	D.C. Jack	170834
23	u Metal Shield	170512/SH

Miscellaneous

FB701	Transformer Flyback 0420120041	170158
TH702	Thermistor SDT100	170159

CTM644 ELECTRICAL PARTS LIST

f			
Ref. No.	Description	Part No.	
IC's		•	
IC401	IC LA7800	1400106	
IC402	IC LA7830	170444	
1C501	IC STK-7308	170445	
IC502	IC L78MG	170446	
IC503	IC UPC78M12	1422278	
Transistors			
Q401, 402, 506	TR KTC1815-T	170447	
Q403	TR 2SA950Y	170448	
Q404	TR 2SC2271	170449	
Q405 Q501	TR 2SD1397	170450	
Q501 Q502	TR 2SD1207 TR 2SD880(Y)	170451 170452	
Q503, 505	TR KTA1015Y	170452	
Q504	TR 2SC2120Y	170113	
Q801-803	TR 2SC3417	170454	
Diodes		+	
D401, 410, 411	D IS2472T-77	170455	
D402	DZ GZA11 Y BT	1400124	
D405, 407, 408	D DFD05G	170456	
D406	D BB4-FC	1422116	
D501-504	D 20E10	170848	
D505, 507	DZ RD3.6FB	170458	
D506, 508	D DFC10E-KB4	1422115	
D509 D510	D RGP-30J-5001L	170459	
D510 D511, 512	D SR-2M Avalanch D RGP30G-5001L	1400122 170459	
D901-903	DZ GZA6.2 Y BT	1422114	
Coils	L		
L401	Coil Linearity 21000002	170134	
L501	Filter Line Across FK0b160MH14	1400130	
L502	Coil Degauss 8D140013 ·	170842	
L801	Coil Choke 100µH	1400148	
T401	Trans Hori. Drive 305Y001	170463	
T501	Trans Switching 8142006	170845	
Switches			
SW401	Switch, Slide SS-009-7H	900101	
SW501	Switch, Push ESB-90197S	*170306	
Sockets			
J501	Jack HEC0630-01-010	170844	
J801	CRT Socket HPS0171	170843-2	
Variable Resisto	rs		
VR401	VR Rot 500Ω 25B52	170315	
VR402, 404	VR SF 5kΩ	1400227	
VR403	VR SF 5kΩ VOAA00B53	170135	
VR405	VR Rot 20kΩ K121K0Z21	1400035	
VR406	VR 1kΩ A00B13	170466	
VR801 VR802	VR SF 5kΩ Red VR SF 5kΩ Green	1400197	
VR803	VR SF 5kΩ Blue	1400198 1400199	
VR804	VR SF 5kΩ Red	1400199	
VR805	VR SF 5kΩ Blue	1400200	
Fuses			
F501	Fuse FST 2A(T) 250V	1400253	
. 50.	1 455 1 51 2A(1) 250V	1400233	

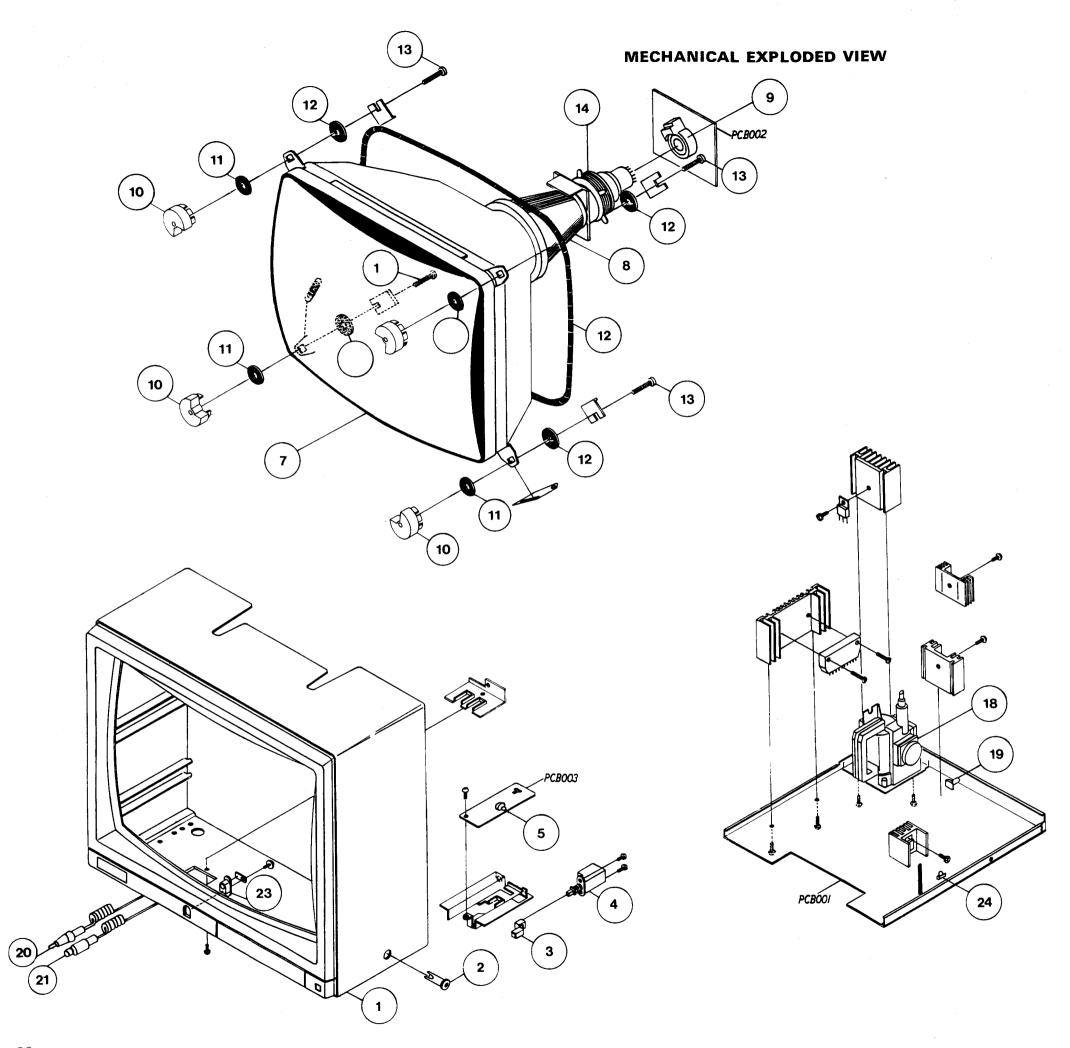
Description	Ref. No.	Part No.
Metal Oxide Re	esistors	·
$0.27\Omega/2W$ $1\Omega/3W$ $10\Omega/4W$ $15\Omega/2W$ $33\Omega/2W$ $220\Omega/2W$ $1k\Omega/3W$ $1.8k\Omega/2W$ $3.9k\Omega/1W$	R513 R502 R511 R512 R509 R433 R503 R427 R505 R805, 808, 812	171071 170416 10008 170410 170411 809229 176557 170137 170407 170408
Fuse Resistors		
0.82Ω/1W 3.3Ω/½W 8.2Ω/¼W 33Ω/½W	R437 R438 R444 R520	1422141 170138 170404 175065
Cement Resist	ors	
15Ω/7W	R436	170417
0.1μF/250V 0.82μF/200V	C506 C430 C425 C512 C505 C507 C515 C405 C519 C402, 522 C518 C424 C415 Viene Capacitors C501 C429	1422152 170419 1422157 171089 170423 20035 170851 176358 20044 1422262 130105 170425
0.82μF/1.6kV	C431	170139
Polyester Capac 0.15μF/100V	C422	170140
Ceramic Capaci	•	
2200pF/4kV 0.001μF/2kV 0.0015μF/2kV 0.0022μF/2kV	C513 C511, 801 C432, 510, 514 C502-504	170430 1422147 170432 140023
Ref. 'No.	Description	Part No.
Miscellaneous		
FB401 TH501 V001 ICP501 ICP502 CD005 CD007	Transformer Flyback 3714009 Degauss Element Tube Cathode Ray A34JLL70X10 ICP-N20 ICP-N38 Cord DC Cord DIN	170468 1400195 170307-A 150442 170136 170316/A 170317/A

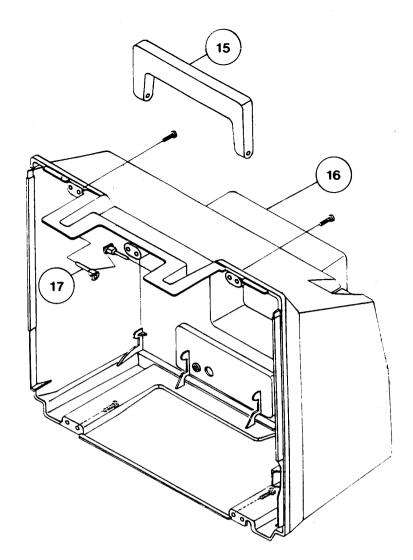
CTM644 SECTION

CTM644 ALIGNMENT INSTRUCTIONS

STEP	FUNCTION	SIGNAL IN	SIGNAL OUT	METHOD	REMARKS
1.	Black and White Tracking.		Monitor Screen.	Turn R & B Drive Controls VR804 & VR805 fully counterclockwise. Turn R, G & B Bias Controls VR801, 802, 803 fully counterclockwise. Set Ser. Nor. Switch to Ser. position.	Monitor connected to CPC464.
2.	Black & White Tracking.		Monitor Screen. Monitor Oscilloscope.	1. Adjust 120V at the collector of Q802 with Brightness Control on the Oscilloscope. 2. Rotate the screen control to fully counterclockwise 8 bring it back to obtain a dirn line of one prominent colour. 3. Rotate the other two colours till a dim white line is obtained. 4. Bring Ser. Nor. Switch to Nor. position.	Monitor connected to CPC464. If required, adjust the colour control.
3.			If no satisfac	tory results repeat step 2.	
4.	Vertical Size.	Program the paper edge.	Monitor Screen.	Adjust VR406 to obtain paper edge to be 145mm.	Use non magnetic ruler.
5.	Focus Adjustment.	Program the paper edge.	Monitor Screen.	Adjust Focus Control on the Flyback Tx for maximum definition & details.	Brightness & Contrast controls set to normal viewing.
6.	5V Adjustment.	Switch on the Monitor.	A.V.O. Meter.	Connect A.V.O. across C518 & adjust VR501 to obtain 5V exactly.	
			This adjustment (6) should r	not be disturbed under normal conditions.	<u> </u>
7.	Sub Brightness Control.	Switch on the Monitor.	A.V.O. Meter.	Connect A.V.O. to collector of Q802. Adjust VR402 to read 123V - 124V.	Keep Brightness Control to maximum position.
8.	Sub H. Hold & H. Hold Adjustment.	Switch on the Monitor.	Frequency Counter.	Rotate H. Hold fully counterclockwise. 1. Adjust VR404 to read 14500Hz. 2. Adjust VR403 to read 15625Hz.	Read the Meter across CRT Heater & Earth.

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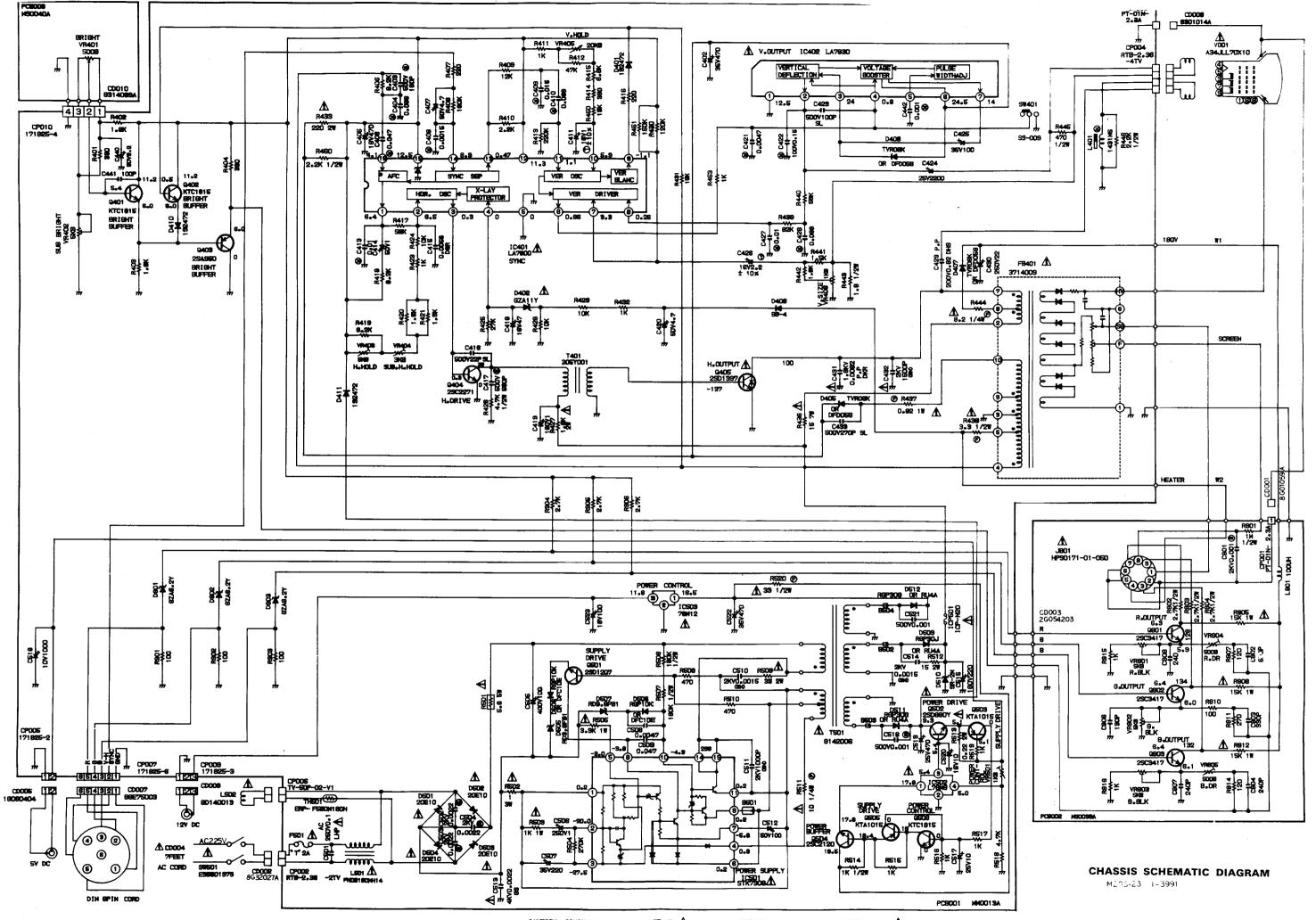


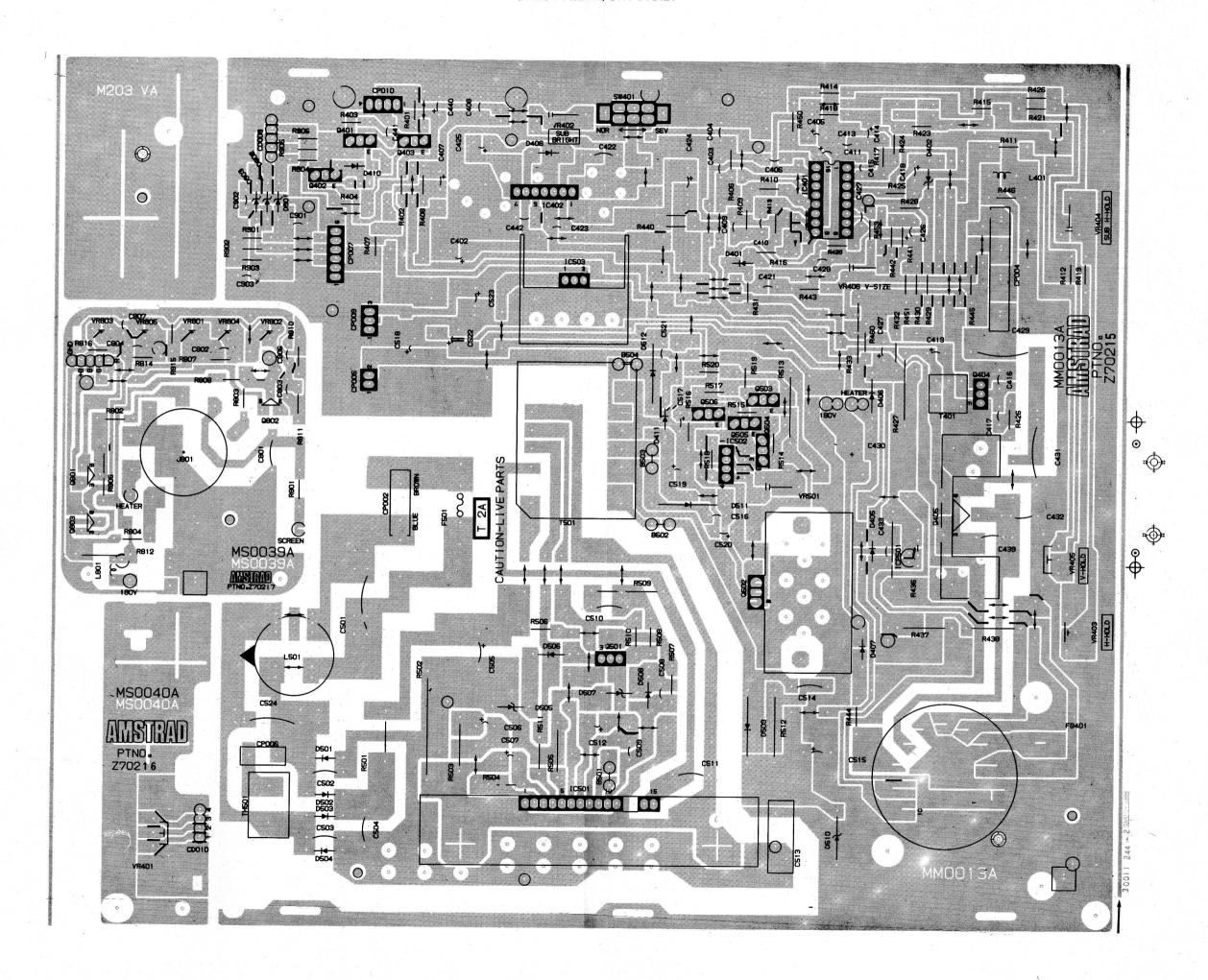


CTM644 MkII CABINET PARTS LIST

Ref.	Description	Part No.
1 2 3 15	Cabinet Front Knob Control Button, Push Handle	170841/A 170304 170305 170312
16	Cabinet, Back	170313/A

*For parts not listed above please refer to original manual





MAJOR COMPONENTS LOCATION GUIDE

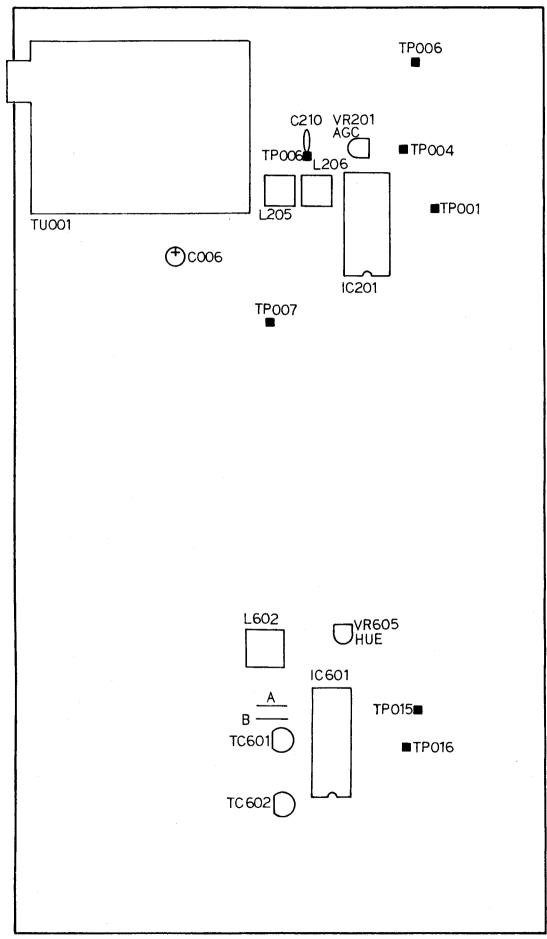


Fig.1

MP3 SECTION

MP3 ALIGNMENT INSTRUCTIONS

Equipment required: D.B. O'scope; A.V.O.; Pattern Generator; Sweep Mark Generator.

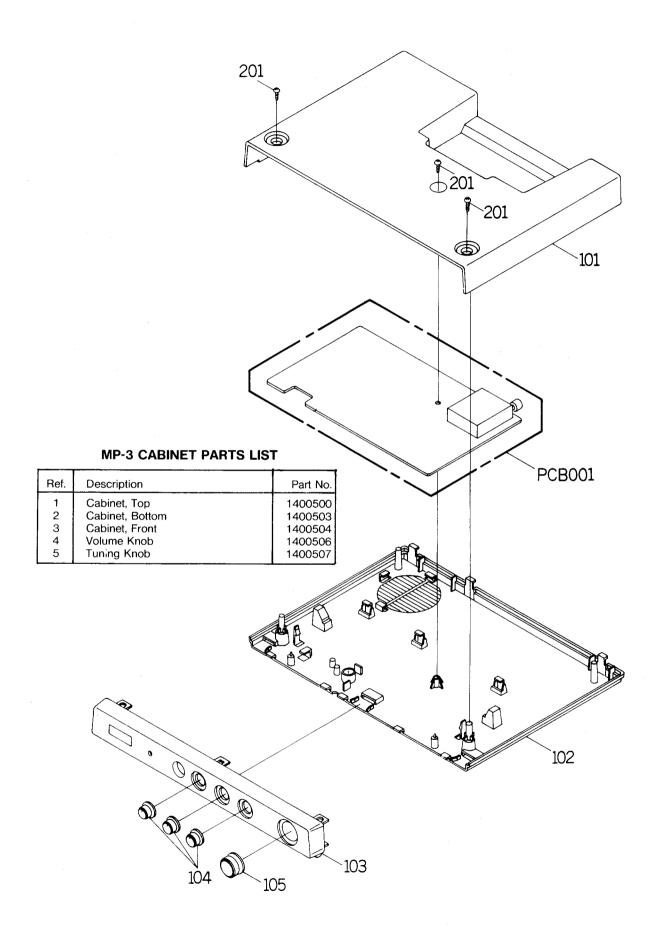
STEP	FUNCTION	SIGNAL IN	SIGNAL OUT	METHOD	REMARKS
1.	A.F.T. Adjustment.	_	T.P. on the Tuner Pack.	Adjust L205 to read fixed voltage at TP006 using A.F.T. Switch from off to on.	-
2.	R.F. A.G.C. Adjustment.	Test Pattern at 80dB.	T.P.005	Adjust VR201 to read 3.9V on A.G.C. pin on the Tuner.	_
3.	Hue Delay Adjustment.	Test Signal from Pattern Generator to Aerial in Socket.	At points "A" & "B" across Video Buffer circuitry Q602, Q603.	Set VR601-1 to max. wave form on the 'scope using VR605, TC6022, L602 to straight lines.	_
4.	A.P.C. Adjustment.	Test Signal from Pattern Generator to Aerial in Socket. Colour Bar selected.	'Scope TP015 & TP016.	Adjust TC601 to max. output on the 'scope.	_
5.	Video I.F. adjustment.	Test Signal from Pattern Generator to Aerial in Socket. Standard Signal.	O'scope.	i) Connect 10kΩ variable between TP004 & ground. ii) Adjust L206 to obtain max. output on the response curve "A" at 39.5MHz. iii) Connect 100Ω between TP009 & PT010. Adjust IFT on Tuner to obtain max. output in Waveform "B". iv) Disconnect 10Ω variable & 100Ω resistors. Short C006 & C210 and reconnect sweep gen. to ``IP007 & TP006. v) Adjust L502 to place 39.5MHz marker on the ref. line on the response curve, "C". vi) Disconnect short between C006 & C210.	Connect H & V outputs of sweep gen. to test point TP001 and ground to TP007. Control signal in to prevent A.G.C. Set A.F.T. switch to on.

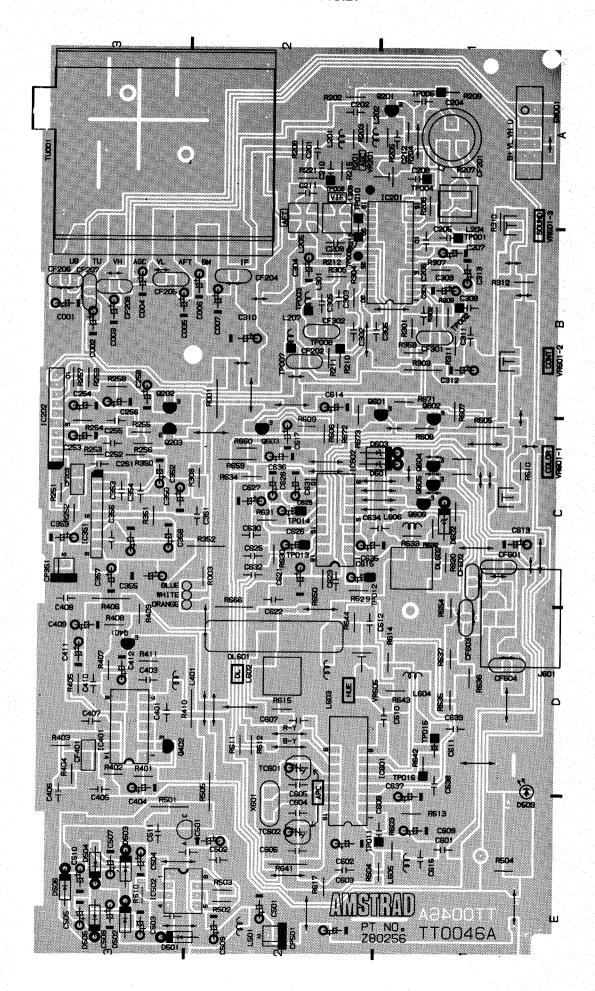
MP3 ELECTRICAL PARTS LIST

Ref. No.	Description	Part No.
IC's		
IC201 IC351 IC401 IC501 IC502 IC601 IC602	IC LA7520N IC LA4140 IC M52684AP IC UPC574J-T IC LB8555D IC AN5620X IC AN5612	1409198 1400511 1400512 1400513 1400514 1400104 1400105
Transistors		
Q201 Q401, 402, 601- 603	TR 2SC3000-AA TR 2SC945-T	151718 1400109
Diodes		2
D501-506 D509 D601-603	D 11E1TAI-T LED DZ GZA11	1400508 1400509 1400510
Coils		
L202 L204 L205 L206 L207 L301 L401 L501 L602 L605 L606	Coil 1.8μH Coil 16084SU Video IFT Coil 3600016 Coil 3600017 Coil 10μH Coil 12μH Coil 4.7mH Coil 270μH Coil 353001 Coil 5.6μH Coil 47μH	1400626 1400663 1400517 1400518 1400523 1400519 1400520 1400521 1400522 1409212 1400524

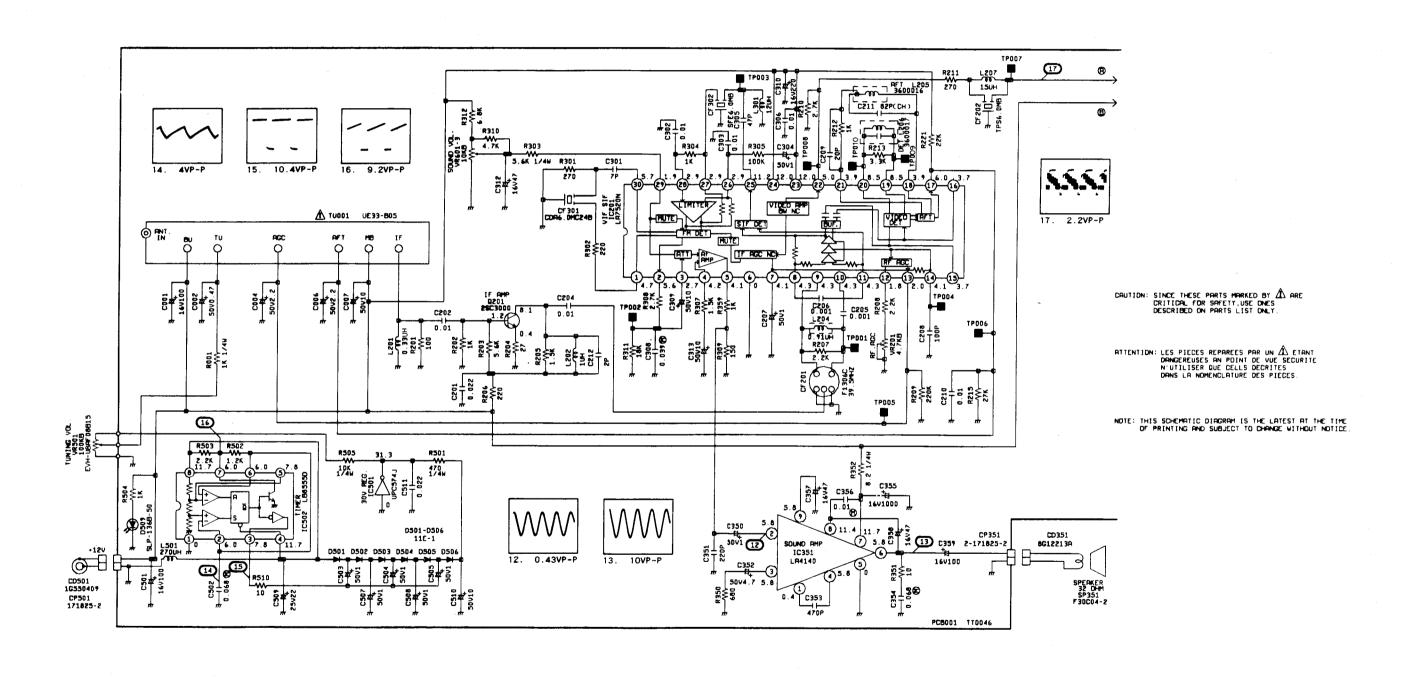
Ref. No.	Description	Part No.		
Crystals				
X601 X401	Crystal NR-18 4.433619MHz Ceramic Oscillator CSB500F9	1400541 1400540		
Sockets				
J601	Jack, DIN	1400525		
Variable Resistors				
VR201 VR501 VR601 VR605	VR SF 4.7k Ω VR Rot 100k Ω Tuning VR Rot 10k+10k+10k Con+CoI+Snd VR SF 2.2k Ω Hue Con	1400526 1400527 1400528 1400529		
Miscellaneous				
DL601 DL602 SP351 TU001	Delay Line Glass EFDEN645A31F Delay ELT-10Z334 Speaker Tuner U	1400535 1400536 1400537 1400539		

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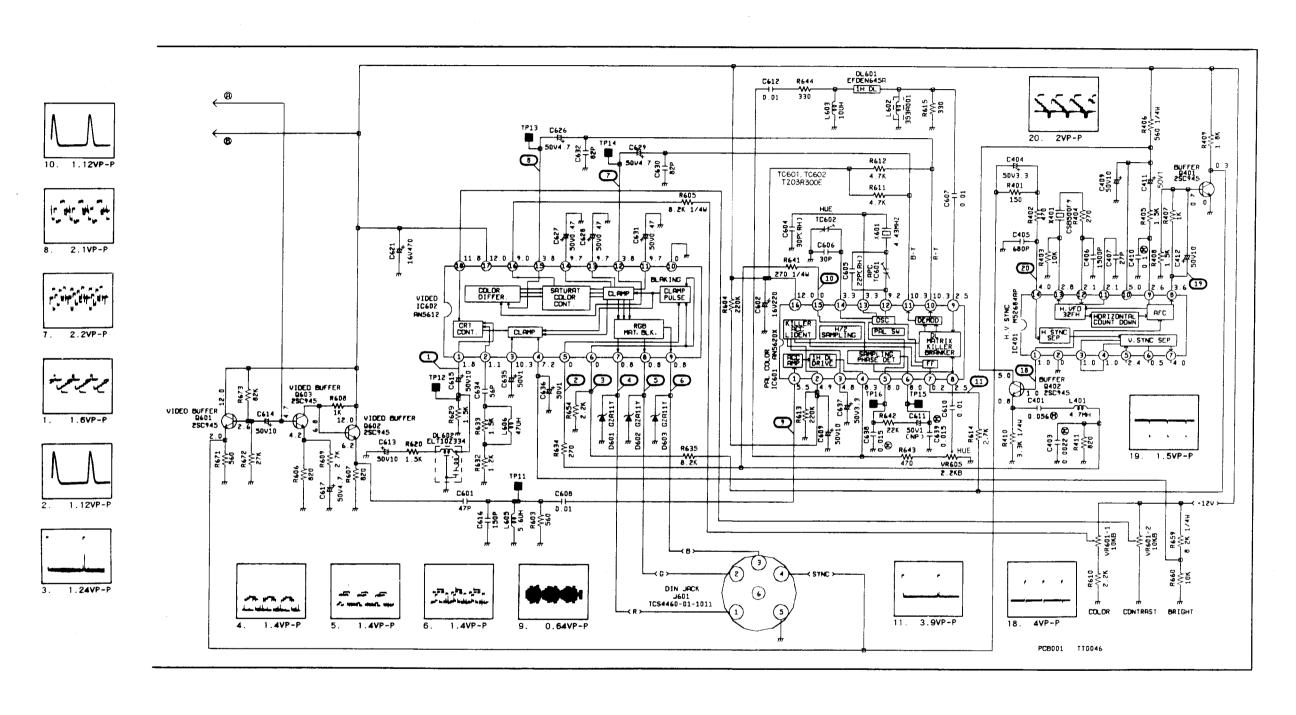




MP3 TUNER SECTION CHASSIS SCHEMATIC DIAGRAM



MP3 VIDEO OUT CHASSIS SCHEMATIC DIAGRAM



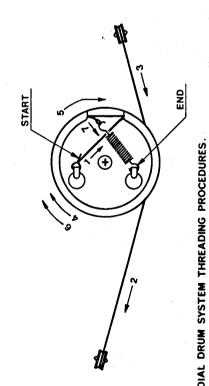
CRUTION: SINCE THESE PARTS MARKED BY A ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED ON PARTS LIST ONLY. RITENTION: LES PIECES REPAREES PAR UN Â ETANT
DANGCREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

CT1 SECTION

CT-1 ELECTRICAL PARTS LIST

	T			
Ref. No.	Description	Part No.		
IC's				
IC2	I IC TMS 3450	160420		
IC1	IC TDA 1083	160421		
Transistors				
Q3	TR 8050C	160414		
Q4	TR 9014C	160415		
Q1, 2	TR 1417F	160416		
Diodes				
D1, 3	D CDG-00	160417		
D2	D AFC Diode FV1043	160418		
D4	D 6.8V	160436		
D5-13, 15	D IN4148	190715		
D14	DI 10V	160419		
D16-21	D Rectifier IN4001	192016		
Coils				
L1, 2	FM Ant Coil 1033	160422		
L4	FM Osc Coil 1032	160423		
L3	FM Trap Coil 1008	160424		
T6	AM Osc Coil Red 6001	160425		
	Chock Coil 2T	160431		
L5	AM Ant. Coil	160432		
L6	LW Ant. Coil	160433		
L8	FM IF Chock Coil 2005	160434		
A	Trimmer 16pF	160405		
T1	FM 1st IFT Orange F548-702985	160428		
T2	FM 2nd IFT Green CEC-F14	160429		
T4	FM Det IFT Pink F784-702987	160430		
CT	AM/FM PVC 5376	160100		
	·			
Ref. No.	Description	Part No.		
Switches				
SW3	Slide Switch SK24F01-M9	160402		
SW1,2	Slide Switch SK43D01-M9	160403		
Fuses				
	Fuse T315mA	160409		
Miscellaneous				
÷	Ferriter Bar	160404		
	Speaker 8Ω	160406		
!	AC Transformer	160435		
	Display Red	160407		



CT1 SCHEMATIC CIRCUIT DIAGRAM

